Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A protective packaging for protecting an at least one article, the protective packaging comprised of a shape memory foam (SMF) structure conforming to at least a portion of the at least one article for protecting the at least one article,

wherein the SMF structure is crosslinked, hydrophobic and has a glass transition temperature (T_g),

wherein the SMF structure is comprised of a structure of polyurethane foam being the reaction product of reacting an isocyanate and a polyol, and

wherein the SMF structure has a shape memory characteristic such that when the SMF structure in an original shape is deformed or compressed above the T_g to produce a deformed or compressed shape and cooled in the compressed shape below the T_g, the SMF structure retains the compressed shape without the need of external forces and when the temperature is raised above the T_g, the SMF structure returns substantially to the original shape.

2. (Cancelled)

3. (Previously Presented) The protective packaging of claim 1, wherein the T_g is at or above about 21°C .

4. (Cancelled)

5. (Previously Presented) The protective packaging of claim 1, wherein the polyurethane foam is prepared using a polyol selected from the group comprised of an aromatic polyester polyol, a polycarbonate polyol, a polyether polyol, and mixtures thereof.

6. (Previously Presented) The protective packaging of claim 1, wherein the polyol has an average functionality between about 2 and about 4.

7. (Previously Presented) The protective packaging of claim 1, wherein the isocyanate is an aromatic isocyanate having a functionality between about 2 and about 3.

8. (Previously Presented) The protective packaging of claim 1, wherein the polyurethane foam is produced by reacting the isocyanate with the polyol and a chain extender.

9. (Previously Presented) The protective packaging of claim 1, wherein the SMF structure has a substantially open cell structure.

10. (Previously Presented) The protective packaging of claim 1, wherein the T_g is less than about 21°C.

11. (Previously Presented) The protective packaging of claim 1, wherein the SMF structure is compressible to less than about 50% of the original volume.

12. (Cancelled)

13. (Original) The protective packaging of claim 1, wherein the SMF structure is at least partially wrapped, coated, laminated, or encased in a film.

14. (Previously Presented) The protective packaging of claim 1, wherein the SMF structure is compressible to less than about 10% of the original volume.

15. (Cancelled)

16. (Withdrawn) A method for producing a protective packaging for protecting an at least one article, the method comprising placing a shape memory foam (SMF) structure having a glass transition temperature (T_g) and an at least one article in a container, whereby the SMF conforms to at least a portion of the at least one article to protect the at least one article.

17. (Withdrawn) The method of claim 16 wherein the SMF is at a temperature of about below or about above the T_g.

18. (Withdrawn) The method of claim 16 further comprising:

deforming or compressing the SMF structure in an original shape to produce a compressed shape;

cooling the compressed shape to below the T_g to retain the compressed shape; and

raising the temperature of the compressed shape to above about the T_g to substantially regain the original shape,

whereby the original shape or the compressed shape conforms to at least a portion of the at least one article to protect the at least one article.

19. (Withdrawn) The method of claim 18 wherein the raising of the temperature of the SMF is accomplished by a process selected from the group consisting of convection heating, conductive heating, microwave heating, or chemical reaction.

20. (Withdrawn) The method of claim 18 wherein the cooling of the SMF is accomplished by a process selected from the group consisting of free convection, forced convection, refrigeration, conductive cooling, cooling baths, and liquid gas or nitrogen.

21. (Withdrawn) The method of claim 18 further comprising providing a plurality of SMF structures and a plurality of articles.

22. (Withdrawn) The method of claim 21 whereby the plurality of SMF structures are stackable for protecting the plurality of articles.

23. (Withdrawn) A method for producing a protective packaging, the method comprising:

providing a shape memory foam (SMF) structure having a glass transition temperature (T_g);

providing a transportation or storage container;

deforming or compressing the SMF structure to produce a compressed shape; and

placing he compressed shape in the transportation or storage container.

24. (Withdrawn) The method of claim 23 wherein the compressed shape is substantially flat.

25. (Withdrawn) The method of claim 23 further comprising providing a plurality of SMF structures suitable for deforming or compressing into deformed shapes for storing in the transportation or storage container.

26. (Previously Presented) The protective packaging of claim 1 wherein the structure is rigid below the T_g and elastic above the T_g.

27. (Previously Presented) A protective packaging for protecting an at least one article, the protection packaging comprised of a shaped memory foam (SMF) structure conforming to at least a portion of the at least one article for protecting the at least one article,

wherein the SMF structure is the reaction product of reacting an isocyanate and an aromatic polyester polyol,

wherein the SMF structure is crosslinked and has a glass transition temperature, T_g, and

wherein the SMF structure has a shape memory characteristic such that when the SMF structure in an original shape is deformed or compressed above the T_g to produce a deformed or compressed shape and cooled in the compressed shape below the T_g, the SMF structure retains the compressed shape without the need of external forces and when the temperature is raised above the T_g, the SMF structure returns substantially to the original shape.

28. (Previously Presented) The protective packaging of claim 27, wherein the T_g is at or above about 21°C.

29. (Previously Presented) A protective packaging for protecting an at least one article, the protection packaging comprised of a shaped memory foam (SMF) structure conforming to at least a portion of the at least one article for protecting the at least one article,

wherein the SMF structure is the reaction product of reacting an isocyanate and a polycarbonate polyol,

wherein the SMF structure has a glass transition temperature, T_g, and

wherein the SMF structure has a shape memory characteristic such that when the SMF structure in an original shape is deformed or compressed above the T_g to produce a deformed or compressed shape and cooled in the compressed shape below the T_g, the SMF structure retains the compressed shape without the need of external forces and when the temperature is raised above the T_g, the SMF structure returns substantially to the original shape.

30. (Previously Presented) The protective packaging of claim 29, wherein T_g is at or above about 21°C.

31. (Previously Presented) The protective packaging of claim 1, wherein the polyurethane foam is essentially free of the isocyanate.